

U.S.S.N. 09/520,130
Arathoon et al.
Response to Notice of Non-Compliant Amendment

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LISTING OF THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application. Added text is indicated by underlining, and deleted text is indicated by ~~striking through~~. Changes are identified by a vertical bar in the margin.

1-53. (canceled)

54. (previously presented) A bispecific antibody comprising a first polypeptide and a second polypeptide, wherein:

(a) the first polypeptide comprises a first heavy chain variable domain, a first multimerization domain, a light chain variable domain, and wherein a first binding domain is formed by the first heavy chain variable domain and said light chain variable domain;

(b) the second polypeptide comprises a second heavy chain variable domain, a second multimerization domain, said light chain variable domain, wherein a second binding domain is formed by the second heavy chain variable domain and said light chain variable domain, and wherein the first and second binding domains bind different antigens;

(c) the first and second polypeptides dimerize by interaction of the first and second multimerization domain to form a bispecific antibody, wherein the first and second multimerization domains each comprise a C_H3 region of an antibody constant domain.

55. (previously presented) The bispecific antibody of claim 54, wherein the multimerization domains of the first and second polypeptide interact at an amino acid

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side chain protuberance of one of the first and second polypeptides and an amino acid side chain cavity of the other polypeptide.

56. (previously presented) The bispecific antibody of claim 54, further comprising a non-naturally occurring disulfide between the first and second polypeptides.

57. (previously presented) The bispecific antibody of claim 56, wherein the multimerization domain is a C_H3 region of an antibody contact domain, and the non-naturally occurring disulfide bond is between the C_H3 multimerization domains of the first and second polypeptide.

58. (previously presented) A composition comprising the bispecific antibody of claim 54 and a carrier.

59. (previously presented) A bispecific antibody comprising a first polypeptide and a second polypeptide, the bispecific antibody comprising:

(a) a common light chain variable domain that has three complementarity determining regions (CDRs) and at least 98% sequence identity to a first light chain variable domain of a first antibody and/or a second light chain variable domain of a second antibody,

wherein the common light chain variable domain only differs from the first and/or second light chain variable domain at amino acid positions outside of the CDRs;

(b) the first polypeptide which comprises a first heavy chain variable domain from the first antibody and a first multimerization domain comprising a first C_H3 domain;

(c) the second polypeptide which comprises a second heavy chain variable domain from the second antibody and a second multimerization domain comprising a second C_H3 domain;

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wherein a first binding domain comprises the first heavy chain variable domain and the common light chain variable domain and a second binding domain comprises the second heavy chain variable domain and the common light chain variable domain, wherein the first and second binding domains bind different antigens, and the first and second multimerization domains interact to form a bispecific antibody.

60. (previously presented) The bispecific antibody of claim 59, wherein the common light chain variable domain has 100% sequence identity to the first and second variable light chain domain.

61. (previously presented) The bispecific antibody of claim 59, wherein the first multimerization domain has a protuberance and the second multimerization domain has a cavity and the first and second multimerization domains interact via fitting of the protuberance into the cavity.

62. (currently amended) The bispecific antibody of claim 61, further comprising a ~~comprising an~~ non-naturally occurring disulfide bond between the first and second multimerization domain.

63. (previously presented) A composition comprising the bispecific antibody of claim 59 and a carrier.

64. (new) A bispecific antibody comprising four polypeptides wherein a first and a second of said polypeptides each comprise a heavy chain constant domain and a heavy chain variable domain, and a third and a fourth of said polypeptides are common light chains, wherein said first polypeptide and said third polypeptide form a binding domain that binds a first antigen, and wherein said second polypeptide and said fourth polypeptide form a binding domain that binds a second antigen, and wherein said first

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polypeptide and said third polypeptide dimerize with said second polypeptide and said fourth polypeptide to form a bispecific antibody.

65. (new) The bispecific antibody of claim 64, wherein the first polypeptide further comprises a first multimerization domain, and the second polypeptide further comprises a second multimerization domain, and wherein the first and second polypeptides dimerize by interaction of the first and second multimerization domains to form a bispecific antibody.

66. (new) The bispecific antibody of claim 65, wherein the multimerization domains of the first and second polypeptide interact at an amino acid side chain protuberance of one of the first and second polypeptides and an amino acid side chain cavity of the other polypeptide.

67. (new) The bispecific antibody of claim 65, further comprising a non-naturally occurring disulfide bond between the first and second polypeptide.

68. (new) The bispecific antibody of claim 67, wherein the multimerization domain is a C_H3 region of an antibody constant domain, and the non-naturally occurring disulfide bond is between the C_H3 multimerization domains of the first and second polypeptide.

69. (new) A composition comprising the bispecific antibody of claim 64 and a carrier.